REMARKS

Claims 1-11, 17-24 and 45-50 remain in the case.

Concerning 35 USC § 103

The Examiner has rejected claims 1-15, 17-24 and 45-50 as being allegedly unpatentable over Altman (US Patent No. 6,287,340, hereinafter "Altman") in view of Caplan et al. (US Patent No. 5,855,619, hereinafter "Caplin"). For the reasons presented below, Applicants respectfully traverse the rejection, and submit that independent claim 1, as it currently stands, is in allowable form.

For ease of reference, the Examiner's attention is respectfully directed to independent claim 1, and the particular section shown in bold:

> An implant for connective tissue substitution in an animal, said implant comprising:
>
> (a) a pair of bone anchors;
>
> (b) at least one support filament joining said bone anchors at their proximal ends, said bone anchors having been joined with said support filament *ex vivo*; and
>
> (c) at least one matrix layer coating said support filament, wherein said matrix layer is in contact with said bone anchors;
>
> wherein said matrix layer is of sufficient thickness sufficient to allow for colonization by a cell and wherein said **implant is dehydrated or lyophilized** prior to implantation.

In the previous Office Action of July 25, 2005, the Examiner asserts that "Altman specifically discloses a 'dehydrothermal' process that includes dehydration." Applicant therefore also respectfully refers to a paragraph of Altman, spanning the bottom of column 4 to the top of column 5:

> The matrix used in the examples disclosed herein was a collagen gel. One of skill in the art will recognize that the properties of the preliminary matrix can be modulated and enhanced by modifying the matrix components, and that use of an enhanced matrix is likely to increase the efficiency of

> production of a bioengineered ACL. Such modifications include, without limitation, modifications aimed at modulating the mechanical and mass transport properties of the matrix. In particular, the concentration of collagen and the degree of crosslinking of collagen in the matrix can significantly influence the mechanical properties of the matrix, as well as the diffusional transport rates of nutrients and large molecules. Since the ACL is made primarily of collagen type I, it is particularly well suited for use as a preliminary matrix component. The concentration of collagen type I in the matrix should be sufficient to support cell adhesion, proliferation and differentiation. In one embodiment, collagen type I is used at a final concentration from about 2 mg/ml to about 6 mg/ml. In another embodiment the final concentration of collagen type I in the matrix is about 2 mg/ml. In another embodiment, the collagen in the preliminary matrix is crosslinked. Suitable processes for cross linking collagen include without limitation, **dehydrothermal** crosslinking and ultraviolet irradiation crosslinking. Other suitable matrix materials include, without limitation polysaccharides, alginates, other proteins such as silk and elastin, synthetic polymers such as polyglycolic acid and polylactic acid and copolymers of the two, and demineralized bone. (Emphasis added)

Based on the above passage, Applicants respectfully submit that Altman discloses "dehydrothermal" treatment only with respect to Altman's "matrix." In contrast, claim 1 recites that the "implant is dehydrated or lyophilized," i.e., the implant comprising components in parts (a), (b) and (c) as recited in current claim 1. The deficiency in Altman is not cured in Caplin because Caplin also fails to disclose or suggest such a "dehydrothermal" treatment as required in claim 1. As such, neither Altman nor Caplan disclose or suggest dehydration or lyophilization of a structure other than a collagen matrix, (e.g., dehydration or lyophilization of a structure comprising an anchor is not mentioned).

Applicants respectfully submit that, as per §2143.03 of the MPEP, in order "to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." Since Altman and Caplan do not teach or suggest dehydration or lyophilization of an implant as recited in instant claim 1, they do not teach or suggest every element of independent claim 1. Applicants therefore respectfully submit that *prima facie* obviousness of claim 1 cannot be established in view the combined references. The remaining claims, which depend directly or indirectly from claim 1 and thus incorporate

all limitations of claim 1, are also not obvious in view of Altman and Caplan. In view of the foregoing, Applicants respectfully submit that the claims are inventive over Altman and Caplan, and reconsideration and withdrawal of the rejection is respectfully requested.

It is believed that the foregoing responds to all of the Examiner's concerns, however if the Examiner has any further questions, he is invited to contact the undersigned. The timely issuance of a Notice of Allowance is respectfully requested. Further, if the Examiner does not consider that the application is in a form for allowance, an interview with the Examiner is respectfully requested.

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Respectfully submitted,

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